

Homework:

$$a) \sqrt{13^2 - 12^2} =$$

$$\textcircled{\smile} b) \sqrt{12^2} = 12$$

$$c) \sqrt{(7+6)^2 - (6+6)^2} =$$

$$d) [2 \times (3+7)]^2 \div \sqrt{13^2 - 12^2}$$

$$\begin{aligned} \sqrt{14^2} &= 14 \\ \sqrt{1642^2} &= 1642 \\ \sqrt{63^2} &= 63 \end{aligned}$$

$$\begin{aligned} a) \sqrt{13^2 - 12^2} &= \sqrt{169 - 144} \\ &= \sqrt{25} \\ &= 5 \end{aligned}$$

What # times (times) is 25

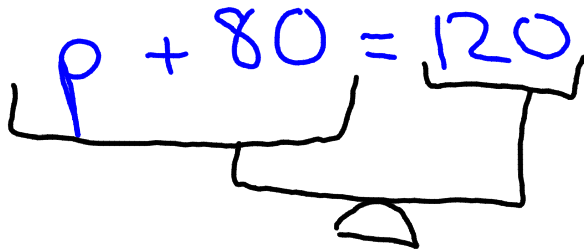
$$\begin{aligned} c) \sqrt{(7+6)^2 - (6+6)^2} &= \sqrt{13^2 - 12^2} \\ &= \sqrt{169 - 144} \\ &= \sqrt{25} \\ &= 5 \end{aligned}$$

$$d) [2 \times (3+7)]^2 \div \sqrt{13^2 - 12^2}$$

$$\begin{aligned} &= [2 \times 10]^2 \div \sqrt{13^2 - 12^2} \\ &= 20^2 \div \sqrt{13^2 - 12^2} \\ &= 400 \div \sqrt{13^2 - 12^2} \\ &= 400 \div \sqrt{169 - 144} \\ &= 400 \div \sqrt{25} \\ &= 400 \div 5 \\ &= 80 \end{aligned}$$

Balancing Equations

Let p = price of pants

$$p + 80 = 120$$


$$\begin{array}{l} -80 \\ \hline p + 80 - 80 = 120 - 80 \\ p = 40 \end{array}$$

① Isolate variable
(get the letter by itself on one side)

② Do the same operation to both sides or the equal

$$\boxed{x} \quad \boxed{3} \quad \boxed{5}$$

$$\boxed{10} \quad \boxed{7}$$

$$x + 3 + 5 = 10 + 7$$

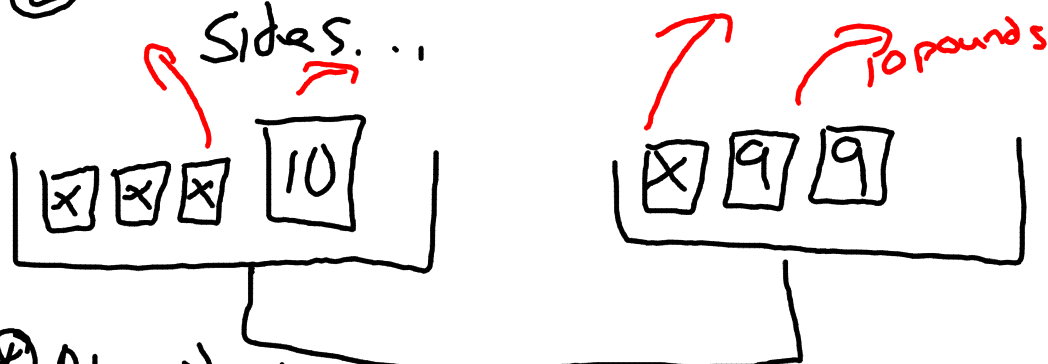
$$x + 3 + 5 = 17$$

$$x + 8 = 17$$

$$-8 \quad | \quad x + 8 - 8 = 17 - 8$$

$$x = 9$$

- ① Get all the letters on one side
- ② Do the same operations to both



* Ahmad's brilliant point... all x's weigh the same.

$$x + x + x + 10 = x + 9 + 9$$

$$3x + 10 = x + 18$$

$$\begin{array}{l} -x \\ \hline 3x - x + 10 = x - x + 18 \end{array}$$

$$\begin{array}{l} -10 \\ \hline 2x + 10 = 18 \\ 2x + 10 - 10 = 18 - 10 \end{array}$$

$$\begin{array}{l} \div 2 \\ \hline 2x = 8 \end{array}$$

$$2x \div 2 = 8 \div 2$$

$$x = 4$$